Division Data Summary

Research and Training Details

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<tr>
<td>Number of Faculty</td>
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<td>Number of Joint Appointment Faculty</td>
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<td>Number of Research Fellows</td>
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<td>Number of Support Personnel</td>
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<td>Direct Annual Grant Support</td>
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<td>Peer Reviewed Publications</td>
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Clinical Activities and Training

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<td>Number of Clinical Staff</td>
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<tr>
<td>Number of Clinical Fellows</td>
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<td>Number of Other Students</td>
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<td>Inpatient Encounters</td>
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<td>Outpatient Encounters</td>
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Significant Publications


This paper describes the identification of first Methionine Sulfoxide Reductase (MSRB3) mutations causing isolated hearing loss in humans. Although MSRB3 is ubiquitously expressed in human physiology, hearing loss is the only symptom in families segregating MSRB3 mutations. This ostensible incongruity may reflect the uniquely high metabolic demand in the ear. This identification provides new insights about the function and the role of oxidative stress on the physiology of inner ear.

Division Highlights

**Saima Riazuddin, PhD**

Dr. Riazuddin was given the COMSTECH Ibrahim Memorial Award from the Islamic Academy of Sciences for her outstanding contributions to the field of research.

**Alessandro deAlarcon, MD and Ravi Elluru, MD, PhD**

Dr. Jeffrey Houlton, Dr. Alessandro deAlarcon and Dr. Ravi Elluru submitted their work on Voice Outcomes Following Adult Cricotracheal Resection at the spring meetings. That work was awarded the Resident Research Award by the American Laryngological Association.

Faculty Members

**Robin T. Cotton, MD,** Professor
Research Interests

Ellis M. Arjmand, MD, PhD, Associate Professor
  Director, Ear and Hearing Center
  Research Interests

David K. Brown, PhD, Assistant Professor
  Director, Audiological Research Lab
  Research Interests

Daniel I. Choo, MD, Associate Professor
  Research Interests

Alessandro deAlarcon, MD, Assistant Professor
  Director, Voice Clinic
  Research Interests

Ravindhra G. Elluru, MD, PhD, Assistant Professor
  Research Interests

John. H. Greinwald Jr., MD, Associate Professor
  Research Interests

Charles M. Myer III, MD, Professor
  Director, Pediatric Otolaryngology Residency Program
  Research Interests

Saima Riazuddin, PhD, Assistant Professor
  Director, Laboratory of Molecular Genetics
  Research Interests

Michael J. Rutter, MD, Associate Professor
  Research Interests

Sally R. Shott, MD, Professor
  Research Interests

J. Paul Willging, MD, Professor
  Director, Pediatric Otolaryngology Fellowship Program
  Research Interests

Joint Appointment Faculty Members

Zubair Ahmed, PhD, Assistant Professor
  Ophthalmology
  Research Interests Genetics

Jareen Meinzen-Derr, MPH, PhD, Assistant Professor
  Biostatistics & Epidemiology
  Research Interests Epidemiology

Scott Holland, PhD, Professor
  Neuroimaging Research Consortium
  Research Interests Neuroimaging
Dimitar Deliyski, PhD, Associate Professor
Communication Science Research Center
Research Interests Communication Disorders

Clinical Staff Members
- Michael Bowen, PA-C, RN, MA, Adult Airway

Trainees
- Nicholas Smith, MD, PGYVI, University of Alabama-Birmingham
- Derek Lam, MD, MPH, PGYVI, University of Washington
- Catherine Hart, MD, PGYVI, University of Cincinnati
- Jonathan Ida, MD, PGYVII, Case Western Reserve University
- Kaalan Johnson, MD, PGYVII, Loma Linda University
- Stacey Clark, MD, PGYVII, The University of Texas Health Science Center

Significant Accomplishments

Oto-Gen
This past year has seen the development of a next-generation platform to rapidly sequence genes involved in pediatric hearing loss. This platform became a reality in the fall of 2011. Developed through a collaboration of the Ear and Hearing Center and the Molecular Genetics Laboratory at Cincinnati Children’s, the “Oto-gen” will be the first NexGen sequencing platform to target common hearing loss genes. This technology will allow rapid and cost effective screening of genes that will diagnose and assist in treatment of pediatric patients with hearing loss.

Hereditary Deafness
The auditory genetics lab of Saima Riazuddin, PhD, made large strides toward unlocking the mystery of hereditary deafness. Her lab recently identified the MSRB3 gene that is responsible for autosomal recessively inherited deafness (DFNB74) in eight Pakistani families. In addition, her lab recently discovered a new locus for recessively inherited deafness (DFNB86) in another family. These discoveries could lead to diagnostic screening tools and treatments.

Obstructive Sleep Apnea in Down Syndrome
A multidisciplinary project that successfully competed for National Institutes of Health funding looks to create and validate anatomical and physiological computational models of children with Down syndrome who have obstructive sleep apnea and use those models as predicators of success for surgical intervention.

Division Publications


**Grants, Contracts, and Industry Agreements**

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<th>Grant and Contract Awards</th>
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<td>A Preclinical Trial of Intratympanic Antivirals for CMV-Related Hearing Loss</td>
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<td>R01 DC 008651</td>
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<td>Improved Method of Drug Delivery to the Inner Ear</td>
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<td>RIAZUDDIN, S</td>
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<td>Defining the Role of Tricellular Tight Junction Protein</td>
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<tr>
<td>Genetic and Functional Characterization of DFNB74 Gene</td>
<td>The National Organization for Hearing Research Foundation</td>
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| Current Year Direct | $274,951 |
|                     |          |
| Total               | $274,951 |